



This manual has been scanned by the
Vickers MG Collection & Research Association

www.vickersmg.org.uk

Please support the work of the Association.

Click on the image to donate through PayPal:



Or regularly support us through Patreon:



OFFICIAL COPY

[Notified in Army Orders for March, 1930.]

[Crown Copyright Reserved.]

26
Manuals
837



THE WAR OFFICE

MACHINE GUN TRAINING

1925

(SUPPLEMENT)

LONDON:

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

To be purchased directly from H.M. STATIONERY OFFICE at the following addresses:

Adastral House, Kingsway, London, W.C.2; 120, George Street, Edinburgh;

York Street, Manchester; 1, St. Andrew's Crescent, Cardiff;

15, Donegall Square West, Belfast;

or through any Bookseller.

1930

Price 2d. net.

57-9999

218.51
OFFICIAL COPY

[Notified in Army Orders for March, 1930.]

[Crown Copyright Reserved.]

26
Manuals
837



THE WAR OFFICE

MACHINE GUN TRAINING

1925

(SUPPLEMENT)

LONDON:

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

To be purchased directly from H.M. STATIONERY OFFICE at the following addresses:

Adastral House, Kingsway, London, W.C.2; 120, George Street, Edinburgh;

York Street, Manchester; 1, St. Andrew's Crescent, Cardiff;

15, Donegall Square West, Belfast;

or through any Bookseller.

1930

Price 2d. net.

57-9999

By Command of the Army Council.

H. J. Creedy

THE WAR OFFICE,
4th March, 1930.

CONTENTS

PART I

ORGANIZATION, TRAINING AND DUTIES

SEC.	PAGE
I. Organization	5
II. System of training	8
III. Sequence of training	11
IV. Machine-gun drill—General duties	12
V. Section drill—Direct fire	24
VI. Platoon drill—Indirect fire	30
VII. Section drill—Night firing	36
VIII. Headquarters training	39
IX. Duties prior to and during the occupation and evacuation of a position	39
X. Modification for an indirect fire position	45
XI. Modifications for an immediate overhead problem	48
XII. The duties prior to and during occupation of positions by night	49
XIII. Duties of the brigade machine-gun officer during training	51

PART II

TACTICAL EMPLOYMENT

XIV. Characteristics, powers and limitations	52
XV. Employment of machine guns	56
XVI. Machine guns in attack	58
XVII. Machine guns in defence	66
XVIII. Machine guns in protection	75
XIX. Machine guns with cavalry	77
XX. Brigade machine-gun officer—Duties	79

MACHINE GUN TRAINING

1925

(SUPPLEMENT)

PART I

ORGANIZATION, TRAINING AND DUTIES

I. Organization

1. Infantry.—

i. The machine-gun company consists in war of headquarters and four platoons of four guns each.

In peace (except in the Colonies), however, it comprises only a headquarters and three platoons.

ii. A machine-gun platoon consists of headquarters and two sections of two guns each.

It is commanded by a subaltern with a serjeant as second-in-command (platoon serjeant).

To enable the commander to guard against surprise, to follow the tactical situation and to maintain communication, its headquarters contains scouts, an observer and an orderly.

iii. A machine-gun section consists of headquarters and two sub-sections of one gun each.

It is commanded by a serjeant or corporal, and its headquarters contains a range-taker and a runner as well as a second-in-command to control the ammunition supply.

iv. The platoon is the smallest machine-gun tactical unit, while the section is the fire unit for direct fire.

PREFATORY NOTE

1. It has been decided to incorporate Machine Gun Training, 1925, in the revised editions of Small Arms Training and of Infantry Training, Volume II, both of which are in course of preparation.

As, however, these latter publications will not be ready for issue for some considerable time, this pamphlet is issued as a Supplement to Machine Gun Training, 1925. It is temporary and provisional and is to be studied in conjunction with the latter book.

Where, however, the instructions in this Supplement are at variance with corresponding instructions in Machine Gun Training, 1925, those in the Supplement will be followed.

2. The Supplement is divided into two Parts.

Part I presents in an abridged form the substance of what will eventually be included in Small Arms Training.

Part II presents in an abridged form the substance of what will eventually be included in Infantry Training, Volume II.

The platoon is the normal fire unit for indirect fire but the section can be so employed if acting independently.

v. The distribution of duties in peace within the machine-gun company for Home and the Colonies is tabulated below.

This organization is based on the duties that have to be carried out to bring guns into, and maintain them in, action.

PEACE ESTABLISHMENTS
Machine-gun company
Home.

	Coy. H.Q.	Pl. H.Q.	Sec. H.Q.	Platoon.	Total Company.	Remarks.
Major or Capt.	1	—	—	—	1	(a) L/Cpl.
Captain ...	1	—	—	—	1	2nd-in-
Subalterns ...	—	1	—	—	3	comd. and
C.S.M. (W.O. II)	1	—	—	—	1	i/c amm.
C.Q.M.S. ...	1	—	—	—	1	supply.
Serjeants ...	1	1	—	—	4	(b) 4 num-
Corporals ...	—	—	1	—	6	bers in
Clerks ...	1	—	—	—	1	each sub-
Cooks ...	2	—	—	—	2	section.
Storeman ...	1	—	—	—	1	
Batman ...	2	1	—	—	5	
Grooms ...	1	—	—	—	1	
Range-takers ...	—	—	1	—	6	
Observers ...	—	1	—	—	3	
Scouts ...	—	2	—	—	6	
Runners ...	—	1	1	—	9	
Gun numbers	—	—	1 (a)	16 (b)	54	
<i>Totals</i> ...	12	7 (1 Pl.) 21 (3 Pls.)	4 (1 Sec.) 24 (6 Secs.)	16 (1 Pl.) 48 (3 Pls.)	105	

PEACE ESTABLISHMENTS—continued.
Machine-gun company.
Colonies.

	Coy. H.Q.	Pl. H.Q.	Sec. H.Q.	Platoon.	Total Company.	Remarks.
Major or Capt.	1	—	—	—	1	(a) L/Cpl.
Captain ...	1	—	—	—	1	2nd-in-
Subalterns ...	—	1	—	—	4	comd. and
C.S.M. (W.O. II)	1	—	—	—	1	i/c amm.
C.Q.M.S. ...	1	—	—	—	1	supply.
Serjeants ...	—	1	—	—	4	(b) 5 num-
Corporals ...	—	—	1	—	8	bers in
Clerks ...	1	—	—	—	1	each sub-
Cooks ...	2	—	—	—	2	section.
Storeman ...	1	—	—	—	1	
Batman ...	2	1	—	—	6	
Grooms ...	1	—	—	—	1	
Range-takers ...	—	—	1	—	8	
Observers ...	—	1	—	—	4	
Scouts ...	—	4	—	—	16	
Runners ...	—	1	1	—	12	
Gun numbers...	—	—	1 (a)	20 (b)	88	
<i>Totals</i> ...	11	9 (1 Pl.) 36 (4 Pls.)	4 (1 Sec.) 32 (8 Secs.)	20 (1 Pl.) 80 (4 Pls.)	159	

It will be noted that the platoon serjeant has been introduced as second-in-command, the sub-section commander has been abolished and a lance-corporal introduced as second-in-command of the section.

vi. Platoons are numbered consecutively from No. 1 throughout the battalion with the addition of (M.G.) in the case of the machine-gun platoons; sections from No. 1 throughout the company. Sub-sections are numbered 1 to 4 in each platoon.

2. Cavalry.—

i. In war, a cavalry regiment has twelve machine guns and four anti-tank weapons. These are organized as a machine-gun squadron consisting of a headquarters and three machine-gun troops, each containing four Vickers machine guns, and one anti-tank troop containing four anti-tank weapons. A troop (commanded by a subaltern) consists of a headquarters, and two sections each sub-divided into two sub-sections.

ii. In peace, a cavalry regiment has eight machine guns * organized as a machine-gun squadron consisting of a headquarters and two machine-gun troops, each containing four machine guns.

iii. According to circumstances the troop or the section can be the tactical unit.

The section is the fire unit for direct fire, and can be the fire unit for indirect fire if the section is acting independently.

The troop is the normal fire unit for indirect fire.

iv. Troops are numbered consecutively from No. 1 throughout the squadron.

Sections are numbered 1 and 2 in each troop and sub-sections numbered 1 and 2 within each section.

II. System of training

1. Three methods are employed to render the various personnel of a machine-gun platoon both individually, and as a team, fit to take part in collective training :—

i. *Individual instruction.*—By which N.C.Os. and men

* A regiment of Household Cavalry has two guns organized in one section.

are taught individually technical machine-gun subjects such as mechanism and the maintenance of the gun in action ; aiming and ranging ; recognition of targets ; the theory of fire control ; packing of limbers ; machine-gun signals, etc.

ii. *Drills.*—By which individuals learn to obey correctly and practise those duties which do not vary with ground or circumstance, and which must be learnt as second nature to enable gun detachments, sections and platoons to work together as teams in battle.

iii. *Training in field duties.*—In which the duties and actions of individuals which vary with the ground, tactical situation and the role of the platoon, are taught and practised, and those learnt during drills are applied to the ground.

2. *Individual instruction.*—The subjects of instruction will be found in the Handbook of the Vickers Gun, and in various sections of Machine Gun Training, 1925.

3. *Machine gun drills* have now been reduced to :—

i. *Elementary-gun drill* (see Sec. 13, Machine Gun Training, 1925).

ii. *Section drill direct fire* (see Sec. V.).—The detail of this drill is written in sequence from the position in readiness, and includes all drill movements in and out of action and practise in fire control.

Any stage of the drill can be carried out separately in accordance with the state of training of the section.

- iii. *Platoon drill indirect* (see Sec. VI).—Indirect fire drill on the same lines as *Section drill direct*.
 iv. *Section drill night firing* (see Sec. VII). —

Ranging drill will now be taught in individual instruction. The advanced drills laid down in *Machine Gun Training, 1925*, are partly covered by the above drills and are partly taught in platoon and section headquarters training. The detail of fire discipline and fire orders will be taught in individual instruction but practised in the drills.

The method of packing limbers will be taught in individual instruction, but the action of taking the equipment in and out practised as a drill in "Prepare for action" in direct and indirect drills.

T.O.E.D. are not affected by the redistribution of duties, except that gun numbers will now also be required to pass the instrument tests laid down for N.C.Os. as regards the dial, bar foresight and clinometer.

4. *Training in field duties.*—

i. The training of the gun numbers in mounting the gun in the open or behind different types of cover, so as to be able to engage definite arcs of fire, should be practised on various types of ground. (See Sec. 16, 3, *Machine Gun Training, 1925*.)

ii. The training of the platoon commander and his headquarters, and of section commanders and their headquarters in their action and duties in coming into and out of action in all circumstances, are laid down in Secs. VIII to XII. They consist of a procedure which has to be applied to ground in accordance

with the tactical situation and the role given to the platoon.

Before starting collective training the platoon and section headquarters should be thoroughly grounded in these by means of tactical exercises on the sand table and on the ground without the gun numbers. This training can be carried out at a time when other personnel of the company are doing individual instruction and drills. The sequence should be :—

- (a) Training of N.C.Os. in the selection of section areas and gun positions; and of the use of cover.
- (b) Sand table exercises to teach the procedure of platoons and sections being brought in and out of action in various situations; the reconnaissance and orders of the platoon commander and the action of the scouts and observer; the action and orders of the section commanders, section corporals and the range-takers.
- (c) The above may be carried out diagrammatically once or twice on the barrack square.
- (d) (i) should be carried out in numerous exercises on the ground.

III. *Sequence of training*

1. The following individual instruction should be carried out concurrently with *Elementary gun drill* :—

Aiming.
 Recognition.
 Machine-gun signals.
 Mechanism and immediate action.
 Ranging.

Packing limbers.

Use of instruments (Direct Fire).

2. The following individual field training should be carried out at the end of the above stage.

Mounting and dismounting the gun on rough ground and behind various forms of cover.

More advanced instruction in the above subjects will be given concurrently with section and platoon drills. The use of instruments (Indirect Fire) must also be learnt before commencing *Platoon drill indirect*.

3. The field training of platoon and section headquarters should be carried out during this period without the gun numbers, and on the lines laid down in Secs. VIII to XII.

IV. Machine-gun drill—General duties

1. This section contains a summary of the duties in gun drill of the platoon serjeant, section N.C.Os. and of each number in the gun detachment. The subsequent sections contain the drills, except *Elementary gun drill*. The summary is intended as a guide for the instructor who will use his own words in explaining the duties to the men.

To avoid repetition in the "drills," certain actions of individual gun numbers have been written out in full in the "Duties." Instruction in these should be given before the drill in which they occur is commenced.

2. The Platoon serjeant :—

i. Direct fire.—

He has no direct fire duties as the section is the direct fire unit.

ii. Indirect fire.—

He calls forward the section commanders, points out gun line and the position of the directing gun (if any). He gives the order "**For indirect fire—mount guns.**"

He is responsible for the general supervision of the duties in the gun line. He forms the connecting link between the platoon commander and the gun line, and will see that the section commanders acknowledge orders from the platoon commander, repeating if required.

When "Director (or displacement) method" is ordered, he gives the order "**All on director**" as soon as the guns are mounted and the director is in position.

When "Post method" is ordered, he gives the order "**All on No. . . .**" He sees that the directing gun is laid on the posts, and sets the dial at 180°. He orders No. 1 of the directing gun to lay on the remaining guns in turn, commencing with the most distant, and reads off and gives out the angles recorded on the dial to the respective guns, commencing with the order "**Zero lines.**"

When "T.O.G. method" is ordered he will detail the directing gun as ordered by the platoon commander and will parallel all guns on the line Directing gun—Director, as in the "post method." He will then order "**Out zero posts.**"

In "T.O.G. (near observation post)" and "Post" methods, as soon as the guns are on parallel lines, he will report to the platoon commander "*Guns on parallel lines.*"

When the target posts are planted he will report "*Guns ready to load*" as soon as all the Nos. 3 have returned to the gun line, except in "T.O.G. (Distant observation post)" when he signals to the platoon

commander that the guns are ready as soon as he has made all arrangements for opening fire.

He is responsible for seeing that the drill for ascertaining whether guns will clear the crest is correctly carried out, and at the time when he reports "*Guns ready to load*" to platoon commander he will also report as to any guns which will not clear crest.

Where the crest is more than 150 yards distant, he will calculate what range should be placed on the tangent sight to enable the Nos. 1 to check whether the guns will clear and will order "**Check crest clearance with sight at. . .**"

If at any time after the guns are in action he is ordered away from the gun line, he will hand over to the senior section commander before leaving.

He signals for the limber when required.

3. The section commander :—

i. *Direct fire.*—

He orders the guns into action and indicates the exact position on which they are to be mounted.

He details an arc of fire and reference points.

He commands his section in action, and controls the fire of the guns, and signals for the limber when required.

ii. *Indirect fire.*—

The senior is in command at the position in readiness and is responsible for ordering "**For indirect fire—Prepare for action**" and the amount of ammunition to be taken up to the gun position.

Each section commander is responsible that the correct equipment is taken out of his section limber, and for supervising the duties of the gun numbers at the position in readiness.

When coming into action, the section commander doubles forward on the order of the platoon serjeant and having ascertained the position of the gun line, he will place himself on the spot on which the flank gun of his section will be mounted. On the order "**For indirect fire—Mount gun,**" he will supervise the arrival of Nos. 1 of his section, ensuring that his inner gun is the correct distance from him and "*Staggered*" back if the method of indirect fire to be employed demands it.

He commands his section in action and places himself in rear and slightly to the left of his left sub-section, where he can both see and be seen by his Nos. 2 and the fire controller.

He is responsible that all orders to his guns are received and acknowledged by Nos. 2. He will himself also acknowledge all verbal orders affecting his guns by raising his hand, elbow bent at right angles and upper part of the arm in line with the shoulder. When an order is signalled by the fire controller, he will repeat the signal and will give the order verbally. He will repeat orders when necessary and will keep his hand raised if a repeat is required.

When he sees that both his guns are ready, he will signal to the fire controller by raising his hand as above.

He is responsible that orders are carried out by the gun numbers and that various instruments and dials are correctly adjusted. This does not necessarily entail his moving to the guns whenever change in elevation or direction is ordered. A close scrutiny of the manner in which the No. 1 taps the gun, or the elevating hand wheel is used will suffice in most cases to show whether the order is correctly carried out.

Before fire is opened he will check the lines of fire of the guns for parallelism. To do this he will stand behind the guns and glance along each barrel casing in turn. If there is a distant crest in front of the guns, lines of fire of the two guns should be on approximately the same point. If no distant crest is available he will see where the line of fire of one gun crosses the crest in front and make an approximation from this as to where the other should cross right or left of it. He will report immediately to the platoon serjeant should his guns not appear to be parallel.

He sees that when the guns are laid for direction and elevation, Nos. 1 check crest clearance. He will notify the platoon serjeant should any gun not clear crest.

He should not move about the section more than necessary.

Where firing is carried out by chart, he takes charge at one of his guns and interprets into orders the fire control chart for that gun.

If ordered to take charge at the gun line, he will carry out the duties as laid down for the platoon serjeant. He will hand over his section to his section corporal.

He will control the fire of his section when it is acting independently in indirect fire.

iii. *Night firing.*—

He locates the gun pegs and points one of them out to the section corporal. He superintends the mounting of the other gun.

He superintends one of his guns in action in addition to his other duties, assisting No. 1 and No. 2 with his torch as required.

He gives direction to each gun by ordering No. 4 to accompany him with the night firing box to each

direction peg in turn. He will hold the lamp over the peg until the section corporal reports "No. ... correct."

He gives out the elevation, and as soon as the guns are in the correct line and the correct elevation has been placed on them, gives the order "**Out night aiming lamps.**"

He does not give the order "**Load**" (or in the case where the platoon commander is controlling, report "*Guns ready to load*") until both Nos. 3 have reported to him from the front.

4. The section corporal :—

i. *Direct fire.*—

He is in command of the section at the position in readiness. He gives the order "**Prepare for action,**" orders the amount of ammunition to be taken to the gun position, and supervises the numbers going into action.

ii. *Indirect fire.*—

He assists the section commander at "For indirect fire, prepare for action."

When firing is carried out by chart, he takes charge at one of the guns of his section and interprets into orders the fire control chart for that gun.

He will be prepared to carry out the duties of section commander when required.

When his section is acting independently in indirect fire he will perform the indirect fire duties laid down for the platoon serjeant and the section commander.

iii. *Night firing.*—

He gives the order "**For night firing—Prepare for action.**"

He reports to the section commander on the position, and is pointed out his gun peg.

He supervises the mounting of one gun over its peg.

At the order "No. ... direction" he goes to the gun named and reports "No. ... correct" as soon as he is satisfied that the gun is accurately laid for direction.

He superintends in action the gun told off to him by the section commander and assists No. 1 and No. 2 in their duties with his torch when required.

Note.—Although the following duties have been subdivided under the heads of "Direct fire," "Indirect fire" and "Night firing," certain of the indirect fire duties will require to be taught at the same time as "Section drill—Direct fire," so as to cover the cases where, when firing direct, circumstances render it necessary for indirect means to be employed to enable the aim to be maintained and fire continued.

5. No. 1

i. Direct fire.—

* He commands the gun in action and is responsible that it is clean and that the mechanism is working smoothly.

* He carries the tripod in and out of action, removing it from and replacing it in the limber as ordered. He mounts and dismounts the gun as directed, assisted by No. 2.

* He is at all times responsible that his clamp is correctly adjusted.

* He loads, lays and fires the gun in accordance with the orders of the fire controller.

He will call "Repeat" at the conclusion of the "Indication" should it not be clear.

He does not commence to lay his gun until told to do so by No. 2. When the gun is laid he informs No. 2.

* He will frequently check his aim between bursts of fire.

* When the order "Stop" is given he relays on to his original point of aim.

* He maintains the gun in action in accordance with the instructions contained in the handbook of the gun.

He will observe his own fire, but he will not correct on his own observation, except in the case of control breaking down.

When ordered by the fire controller, or on his own initiative if he notices that his point of aim is becoming obscured, he will pick up a gun aiming mark. To do this he will check his aim, and without moving the gun, run his tangent sight slide up or down until his line of sight passes through a mark as prominent and distant as possible. He memorizes the reading on the tangent sight. Whenever possible he will relay on his original point of aim, adjusting his sights for range in accordance with the fire orders he has received.

ii. Indirect fire.—

Note.—The following duties are additional to the normal duties at the gun, marked * under "Direct fire" above.

At the order "Out target posts" or "Out aiming lamps," without moving the gun he runs the tangent sight slide to 2500 or just above. He directs No. 3 to move or adjust the post until the line of sight is at 6 o'clock on the bull. In indirect fire, on all occasions when No. 2 places deflection on the bar foresight he will relay on the bull for direction.

When ordered to lay on the director, he will lay on the socket just above the reading plate. When laying on another gun he will lay on the centre of the socket, or if it is visible, on the filling plug.

At all times when an order necessitating the use of the clinometer is given, he lowers the tangent sight and raises the rear cover. He takes correct holding while the elevation is being placed on the gun. When No. 2 has removed the clinometer he closes the rear cover and raises the tangent sight.

In indirect fire, as soon as the elevation has been placed on the gun, if no order as to crest clearance has been received, he will drop the slide of the tangent sight to zero and ascertain whether the line of sight clears the crest, reporting to the section commander should it not do so.

iii. Night firing.—

Once the order to fire has been given, he will stop firing when the lamps are turned out.

6. No. 2 :—

i. Direct fire.—

* He acts as assistant to No. 1.

* He carries the gun in and out of action removing it from and replacing it in the limber with the assistance of No. 3. He assists No. 1 to mount and dismount the gun.

* He carries the spare parts case in action.

* He is responsible for observing all signals and conveying their meaning to No. 1.

* When the order to fire or stop is given, he will tap No. 1 on the back saying "Fire" or "Stop" as the case may be.

When a direct fire order is given, he orders No. 1 to lay as soon as the fire controller raises his hand.

* When told to do so by No. 1, and when his gun is ready to fire, he will raise his hand, dropping it when the order to fire is given. The left hand will be extended behind No. 1's back, straight from the shoulder and at such a height that it can be seen by the fire controller.

He will also raise his hand as above on the cautionary order preceding the range or any correction in elevation.

He will drop his hand on completion of the order to indicate that it has been understood.

He will not drop his hand should he wish the order repeated.

When No. 1 picks up a gun aiming mark, No. 2 will ascertain its position and the setting on the tangent sight.

ii. Indirect fire.—

Note.—The following duties are additional to the normal duties at the gun, marked * under "Direct fire" above.

If indirect fire is ordered, he carries the bar foresight and clinometer in action. They should be set at zero when not in use. In indirect fire he kneels on the right of the gun in such a position that he can both see his section commander and attend to the service of the gun.

He will raise his hand with the elbow bent at right angles and the upper part of the arm in line with the shoulder, on the cautionary order preceding any order effecting his gun.

He will drop his hand on completion of the order, to show it has been understood.

He will not drop his hand should he wish the order repeated.

He attends to the direction dial. He sets it by undoing the thumbscrew, turning the dial until the graduation for 0° or 180° as required is opposite the pointer on the crosshead, and then screwing up the thumbscrew.

When ordered to swing the gun through a particular angle, he will loosen the traversing clamp, swing the gun round until the pointer on the crosshead is at the graduation for the angle required on the direction dial and clamp up.

After the order "**Zero lines**" has been given he keeps the dial at zero until a fresh zero line is ordered.

He affixes the bar foresight to the gun when necessary, by placing it over the wing protectors of the foresight and clamping up. He sets the sliding foresight as required. When right deflection is ordered he moves the foresight to the left and vice versa.

He places elevation on the gun by means of the clinometer. He sets the clinometer at the angle ordered, and as soon as No. 1 has raised the rear cover, places it with the arrow to the front on the side plates of the breech casing of the gun. It should be placed sufficiently far forward so as not to foul the trigger bar lever.

When it is required to ascertain the quadrant elevation on the gun, he places the clinometer on the side plates, turns the milled head until the bubble is central, and takes the reading.

7. No. 3.—

i. *Direct fire.*—

He is responsible for keeping No. 2 supplied with all his needs for maintaining the gun in action.

He assists No. 2 at the limber. He carries the condenser and the initial supply of ammunition into action, and carries the condenser out of action.

He is responsible for effecting minor repairs as required by No. 2.

ii. *Indirect fire.*—

In addition to the above, he plants target posts as ordered, under the direction of No. 1. Before leaving the gun he will ascertain, by looking over the sights, as nearly as possible the position for the bull. The post should be planted not less than five yards forward and No. 3 should attempt either to place the bull on the ground or to plant the post vertically. If this is not possible the foot of the post should be driven firmly into the ground sufficiently far to one side to admit of full use being made of the telescopic portion of the post.

He plants zero posts in a similar manner when required.

iii. *Night firing.*—

When the aiming lamp is attached to the target post, he plants it in the normal way, except that he will be unable to get direction from looking over the sights.

8. No. 4.—

i. *Direct fire.*—

He is responsible for anticipating and meeting the demands of No. 3 for ammunition, spare parts, oil, water, and any other articles of equipment.

ii. *Indirect fire.*—

No additional duties

iii. *Night firing.*—

He is responsible for the night firing box and carries it in and out of action when required. After handing the lamps to No. 3 he pays out the wire and attends to switching the lights on and off, or dimming them as ordered.

9. No. 5.—

In action he assists No. 4 at the limber. He acts as brakeman when necessary.

V. *Section drill—Direct fire*

1. *To prepare for action.*—

The section corporal ... **"Prepare for action."**

Nos. 1, 2, 3 and 4 of each sub-section double to the fore part of the limber. Odd sub-section on the off side, even sub-section on the near side. No. 4 in front, then Nos. 3, 2, 1 in that order. Each unfastens a rope and the cover is thrown back on to the perch.

No. 1 removes the tripod and condenser tube from the limber, doubles forward 25 yards and 10 yards to the flank, places them on the ground and lies down on the left side of the tripod.

No. 2 assisted by No. 3, removes gun chest and places it on the ground beside the limber.

No. 2 removes gun from chest.

No. 3 removes spare parts case and drops strap over No. 2's right shoulder.

No. 2 doubles forward and places the gun on the ground 3 paces to the right of No. 1, and lies down on the right side of the gun.

After No. 2 has taken up his position No. 1 hands over the condenser tube to him.

No. 2 fixes the condenser tube to the gun.

Meanwhile No. 3 takes out one belt box and the condenser, doubles to a spot 3 paces in rear and immediately between No. 1 and 2 and lies down on the left side of the ammunition box and condenser.

No. 4 takes out four belt boxes, places two on the ground beside the limber, and doubles forward to No. 3 with the other two, placing them with the box already there. Doubles back to the limber, picks up the two boxes he left there and doubles to a position about 10 yards to the flank of the limber and lies down.

If the section corporal orders more than five boxes to go up to the gun position No. 4 takes forward the two he has now with him. No. 5 removes the extra boxes from the limber and takes them up to No. 4. The number of journeys made will depend on the number of extra boxes required and the length of the carry.

Nos. 5 rearrange the remaining equipment in the limber, replace gun chests and limber covers, and fall in in the rear of the limber.

The gun numbers will examine their equipment as in "Elementary gun drill," reporting correct or otherwise to the section corporal.

The section corporal lies down midway between the sub-sections and five yards in front.

2. To come into action.—

Section commander ... **"Action."**

Nos. 1, 2 and 3 mount the gun on the spot indicated by the section commander in accordance with the detail for "Action" in "Elementary gun drill," Nos. 3 taking up condenser and 2 belt boxes, Nos. 4 taking up the remaining boxes to No. 3.

(Note.—The section corporal marches the spare numbers and the limber to the rear.)

3. To engage a target.—

Fire orders will be executed in accordance with instructions on fire control and fire discipline.

(Note.—The practice of fire orders in all forms is an essential part of this drill.)

4. To continue firing in the event of the target becoming obscured :—

i. When target is likely to be obscured for a short time only.

Section commander ... **"Pick up gun aiming marks."**

No. 1 picks up a gun aiming mark.

No. 2 sets the direction dial at zero. He looks over the sights and memorizes the aiming mark, its position and the setting of the tangent slide.

ii. When target is likely to be obscured for some time—

Section commander orders gun aiming marks to be picked up as above.

He then orders **"Indirect fire equipment."**

No. 3 passes order back to No. 4.

Nos. 4 or 5 remove clinometers and target posts from limber, hand them to No. 4 of the odd sub-section

who takes them up to Nos. 3. No. 3 hands clinometer to No. 2.

At first opportunity.—

No. 1 relays on gun aiming mark.

No. 2 sees that direction dial is set at zero, and takes the elevation on the gun with the clinometer.

Section commander ... **"Unload" "Clear guns."**

No. 1 unloads and clears gun as in "Elementary gun drill."

Section commander ... **"Out target posts."**

No. 1 closes rear cover.

No. 3 plants target post under the direction of No. 1.

5. To make preparations in daylight to continue firing in darkness.

Note.—Section commander sends for any night firing equipment which is not already at the gun position.

Section commander ... **"Prepare for night firing."**

No. 1 relays on target (or target post if firing indirect).

No. 2 sets dial at zero and takes the elevation on the gun with the clinometer. He attaches the bar foresight if not already on.

No. 4 of the odd sub-section brings up the night firing box and two torches, and hands one each to the section commander and the section corporal.

He places the night firing box between the sub-sections and lies down in rear of it, having first extracted the night sights and handed them to Nos. 2.

No. 2 fixes the night sights and reports to section commander **"No.... Ready."**

Section commander ... **"Unload." "Clear guns." "Out aiming lamps."**

No. 4 of the odd sub-section hands night aiming lamps to Nos. 3, who will move out in front of the guns, taking with them target posts if not already planted. They plant night aiming lamps under the direction of No. 1 and return by the flanks reporting to the section commander when in.

Section commander orders "Load" and "Fire" as required.

6. The replacement of breakages.—

i. Where the spare part required is carried in spare parts case.

No. 2 replaces broken part from spare parts case. He then hands the broken part to No. 3 with the wallet.

No. 3 repairs the part and returns it with the wallet to No. 2, if possible waiting until the next supply of ammunition is required.

No. 3 informs No. 4 what spare part is broken. No. 4 or 5 obtains it from the spare parts box, passes it up through No. 3 to No. 2, who replaces it in the wallet as soon as he is able.

ii. Where spare part required is not carried in the spare parts box—

No. 2 informs No. 3 what is required. No. 3 informs No. 4. No. 4 or 5 obtains it from the limber and passes it up through No. 3 to No. 2.

7. To cease firing.

Section commander ... "Cease firing."*

Nos. 1, 2 and 3 cease firing as in "Elementary gun drill." No. 3 takes back the target post if forward, and makes as many journeys as necessary to remove the belt boxes at the gun.

* If the target posts are planted, section commander first orders "Unload." "Clear Guns."

When signalled for, the limber, under orders of the section corporal, moves forward to a position immediately in rear of the gun position accompanied by Nos. 4 and Nos. 5 and halts.

Nos. 4 and Nos. 5 remove cover from forepart of the limber, throw it back on to the perch, take out gun chests and lay them on the ground. They square off the belt boxes which are left in the limber.

No. 4 doubles forward and lies down 10 paces in rear of No. 3.

Section commander ... "On limber."

No. 3 doubles back to the limber with the condenser, target post if forward, and as many belt boxes as possible.

No. 4 doubles forward, takes up belt boxes not brought back by No. 3 and doubles to the limber.

Nos. 3 and 4, assisted by No. 5, pack the floor portion. If the night firing box has been in use No. 4 of the odd sub-section returns it to the limber on his first journey.

No. 1 doubles back with the tripod, No. 2 with the gun, clinometer and bar foresight if forward. As soon as the floor portion is packed No. 1 replaces tripod in limber.

No. 2 takes off the condenser tube and hands it to No. 1, who replaces it in the limber.

No. 2 places the gun in the chest, closes and secures the lid.

Nos. 2 and 3 lift the gun chest into position

No. 2 replaces spare parts case in limber.

If target post, bar foresight and clinometer have been forward, No. 5 takes these over from Nos. 3 and 2 and repacks them in the rear portion, doing up the cover.

Nos. 2 and Nos. 3 replace cover on front portion.

As soon as each number has completed his duties he will double to his position in front of the limber as in "**Fall in.**"

VI. Platoon drill—Indirect fire

1. To prepare for action.

Senior section commander ... "**For indirect fire—Prepare for action.**"

The action of each section will be as in "Section drill, direct fire." In addition the section corporals and Nos. 5 unfasten the cover on the rear portion of the limber.

The former take out clinometers and bars foresight, and hand the same to their Nos. 2. No. 2 places the sling over the left shoulder. Nos. 5 take out target and zero posts and hand the same to their Nos. 3. The section corporals assist Nos. 5 to square off kit, etc. The section commanders will place themselves midway between their sub-sections and five yards in front, and lie down.

2. To come into action.—

Platoon serjeant ... "**Section commanders.**"

Section commanders double forward receive their orders from the platoon serjeant, double back to the flanks of the gun line and kneel down.

Platoon serjeant ... "**For indirect fire—Mount gun.**"

No. 1 doubles forward, mounts his tripod on the position indicated by the section commander. He kicks in the shoes of his tripod before sitting down.

No. 2, having mounted the gun, kneels on his left knee on the right side of the gun, and affixes the bar foresight.

Nos. 3 and 4 carry out their duties as in "Section drill, direct fire."

(*Note.*—The section corporal of each section will march his Nos. 4 and 5, and the limber to the rear.)

3. To parallel the guns.—

The guns are paralleled by one of the methods described in "Machine Gun Training, 1925."

i. Director or displacement method.—

Platoon serjeant ... "**All — on director.**"

No. 1 lays on the director, and when laid No. 2 sets the dial at zero.

Platoon commander ... "**Zero Lines**"

"No. ... **Right (or left)** ... **deg.** ... **mins.**"

"No. " **ditto.**"

"No. " **ditto.**"

"No. " **ditto.**"

No. 2 swings the gun through the angle ordered and resets the dial at zero.

ii. Post method.—

Directing gun.—At "**Mount gun**" No. 1 aligns his gun on the posts with the assistance of No. 2, moving the tripod right or left until his line of sight is in exact alignment of the posts. When this has been checked by the platoon serjeant the latter sets dial at 180°.

Platoon serjeant ... "**All—On No.**"

Nos. 1 of remaining guns lay on the directing gun. When laid, Nos. 2 set their dials at zero.

No. 1 of the directing gun lays on each gun in turn as directed by the platoon serjeant.

Platoon serjeant ... "Zero lines."

"No. Right (or left) ... deg ... mins."

"No. " ditto."

"No. " ditto."

Nos. 2 swing their guns through the angle ordered and reset the dials at zero.

No. 2 of the directing gun finally swings his gun back to 180° and sets the dial at zero.

iii. T.O.G. method.—

Directing gun.—As for (ii) "Post method," except that the gun is laid on the director.

The guns are then paralleled as in (ii) "Post method."

Platoon serjeant ... "Out zero posts."

No. 3 plants the zero post, directed by No. 1.

4. To place the necessary elevation on the gun.—

Platoon commander ... "Elevation (or Depression)

No. ... (or all) ... deg. ... min."

No. 2 sets clinometer at elevation (or depression) ordered, and assisted by No. 1 places the elevation (or depression) required on the gun.

He replaces the clinometer in its case without resetting it at zero.

5. To check crest clearance.—

i. Near crest.—

When the gun has been laid for elevation No. 1 sets tangent sight at zero and see that the line of sight over the gun foresight clears the crest. If it does not clear he reports to the section commander. "No. ... does not clear crest."

ii. Distant crest.—

Platoon serjeant ... "Check crest clearance with sights at..."

No. 1 sets tangent sight at graduation ordered and proceeds as in (i).

6. To plant target posts.—

Platoon commander ... "Out target posts."

No. 3 plants target posts under the direction of No. 1.

After target posts have been planted, No. 1 tests the adjustment of his clamp, finally relaying on to the bull.

7. To load.—

Platoon commander ... "Load."

No. 1 loads in normal manner.

8. To distribute (or Concentrate).—

Platoon commander ... "Distribution (or Concentration)."

"No. ... Nil.

"No. ... Right (or left) ... deg. ... mins."

"No. ditto."

"No. ditto."

No. 2 sets the bar foresight at the angle ordered.

No. 1 taps the gun across until his line of sight is on the target post.

If distribution is ordered Nos. 1 and 2 check elevation as follows :—

No. 1 raises the rear cover.

No. 2 places the clinometer on the outside plates and levels the bubble by turning the hand wheel.

No. 1 adjusts his tangent slide so that the line of sight is on the target post, and notes the reading.

9. To traverse.—

Platoon Commander ... **“Traversing right and left ... deg. ... mins. (or mins).”**

Nos. 1 of the right section in action traverse first to the left, Nos. 1 of the left section first to the right, by the amount ordered.

10. To make an allowance for side wind.—

Platoon commander ... **“Wind right (or left) ... deg. mins.”**

No. 2 sets the bar foresight at the amount ordered. (If the bar foresight is not at zero he adds or subtracts this amount to or from the angle on the bar foresight.)

No. 1 taps the gun over until the line of sight is on the target post.

11. To engage a target.—

The target is engaged by means of fire orders in accordance with the instructions on “Fire control” and “Fire discipline” laid down.

12. To change the elevation.—

Platoon commander ... **“Stop—All up (or down) ... mins.” “Go on.”**

No. 1 relays on target post, makes the necessary correction with the elevating wheel, adjusts his line of sight and continues firing. If the elevation is lowered, he first checks crest clearance.

No. 2 adds or subtracts the angle ordered to or from the setting on the clinometer.

13. To change target.—

i. Direction.—

Platoon commander ... **“All ... On zero lines.”**

No. 2 sets the bar foresight at zero.

No. 1 relays on target post.

No. 2 sees that the dial is at zero.

Platoon commander ... **“All—Right (or left)..... deg. mins.”**

(a) Where the angle ordered can be put on bar foresight.—

No. 2 sets bar foresight at angle ordered.

No. 1 relays on target post.

(b) Where the angle ordered cannot be put on bar foresight.—

No. 2 swings the gun through the angle ordered by means of the direction dial.

ii. Elevation.—

Platoon commander ... **“Elevation (or Depression) No. ... (or all) ... deg. ... mins.”**

Elevation or depression is placed on the gun as before.

(a) Where the angle of switch ordered can be put on bar foresight.—

No. 1 readjusts his line of sight on to his target post.

He ascertains whether his gun will clear the crest and the target post.

(b) When the angle of switch ordered cannot be put on the bar foresight.—

Platoon commander ... **“Unload.”**

“Clear guns.”

“Out target posts.”

“Load,” etc.

or Platoon commander continues with the fire order, No. 1 immediately picking up a gun aiming mark.

14. To come out of action.—

Platoon commander ... **"Unload," "Clear Guns," "Cease Firing," "On Limber."**

The movement will be carried out as in "Section drill, direct fire."

No. 3 will take back zero post if in use.

Note.—No. 2 removes bar foresight after the gun has been dismounted.

VII. Section Drill—Night firing

Note.—The following drill presupposes that guns are being brought up after dark.

1. To prepare for action.—

Section corporal ... **"For night firing—Prepare for action."**

All duties are the same as for "For indirect fire—Prepare for action," except that gun numbers will remain with their equipment close to the limber and that No. 4 of the odd numbered sub-section removes the night firing box.

No. 5 of the odd sub-section, in addition to his other duties, carries out the ammunition duties of No. 4.

2. To come into action.—

Section commander or section corporal ... No. ... **"For night firing—Mount gun."**

No. 1 moves forward with his tripod to a position pointed out to him by the section commander or section corporal a few feet in rear of the gun peg. He removes the crosshead and with the assistance of the section commander or section corporal, mounts the tripod so

that the cross wires are directly above the peg. He stamps in the shoes and after the section commander or section corporal has satisfied himself that the mounting is directly above the gun peg, No. 1 replaces the cross-head.

He calls up No. 2, who meanwhile has affixed the bar foresight.

No. 2 mounts gun on tripod, and fixes night firing sights when handed to him by No. 4.

No. 3 brings forward target post, condenser and two ammunition boxes. He places the condenser and ammunition beside the gun in the normal manner and proceeds to the centre of the section with the target post.

No. 4 of the odd sub-section brings forward the night firing box, places it between the two guns, hands the night firing sights to No. 2, and lies down in rear of the box. He accompanies the section commander to the direction pegs when ordered to do so.

3. To lay the gun in the required line.—

Section commander ... **"No. ... Direction."**

No. 1 of the gun named aligns gun on lamp.

No. 2 sets the dial at zero.

The section corporal checks the line of each gun in turn reporting "No. ... correct" as soon as he has finished.

4. To give elevation to the gun.—

Section commander ... **"Elevation (or Depression) ...deg.....mins."**

Nos. 1 and 2 place elevation on the gun (assisted by supervising N.C.O.).

No. 1 sets sight at 2500.

5. To plant aiming lamps.

Section commander ... "Out aiming lamps."

No. 3, directed by No. 1, places the aiming lamp affixed to the target post in the required position. After lamp has been planted No. 3 moves in round flank and reports to section commander when in.

Note.—The remainder of the drill in action is as for "Indirect fire."

6. To change from night firing to direct fire.—

Section commander ... "Prepare for direct fire."
"Unload"—"Clear guns."
"In aiming lamps."

Nos. 3 double to the front, bring in aiming lamps, handing them to No. 4 of the odd sub-section.

Nos. 1 remove night back sights and hand them to Nos. 2.

Nos. 2 remove night foresights and bars foresight.

No. 4 of the odd sub-section collects the night sights from Nos. 2 and the torches from the section commander and section corporal.

7. To cease firing during darkness.—

Section commander ... "Unload"—"Clear guns."
"In aiming lamps."

Nos. 1, 2, 3 and 4 carry out their duties as in paragraph 6, above.

Section commander ... "Cease firing"—"On limber."

This drill will be carried out as for "Cease firing," "On limber," in "Section drill, direct fire."

VIII. Headquarters training

1. The object of headquarters training is to teach N.C.Os. and H.Q. personnel of platoons and sections their duties in reconnaissance for occupation and evacuation of fire positions, and to practise them in carrying out their duties by day and night under various conditions and on all types of ground.

2. This training in the field should be carried out by the platoon and section headquarters without the gun detachments during the period when the latter are being trained in drills and individual instruction.

It is carried out in the form of simple platoon and section exercises on the sand table and subsequently on the ground.

The exercise should start with an opening situation which should present a task for the machine gun platoon or section to carry out.

The consequent action of the subordinates should be gone into in detail and criticized. When carried out on the ground each man will act in accordance with the orders and situation.

IX. Duties prior to and during the occupation and evacuation of a position

1. Duties prior to and during the move :—

i. The platoon commander—

(a) Goes ahead to maintain touch with the rifle company which he is supporting, with a view to engaging targets as required,

or

(b) Goes ahead to reconnoitre an area in which he has been ordered to occupy a position.

In case (a) he details a line of advance for the platoon which will bring it forward through successive probable fire positions.

The platoon commander is responsible that the platoon does not become involved in minor opposition.

In case (b) he details a covered line of advance and a rendezvous.

In both cases he will give information as to his own movements and issue any instructions which from his knowledge of the ground or previous reconnaissance may assist the platoon serjeant during the forward movement. Where possible he will be accompanied by an orderly.

ii. The platoon serjeant.—

Moves the platoon forward in accordance with orders, in case (a) by bounds from fire position to fire position ; in case (b) direct to the rendezvous.

During the movement and at the rendezvous he is responsible for :—

Knowing the movements of and watching for signals from the platoon commander.

Local protection.

Use of ground.

Formation of platoon.

Movement and position of limbers.

Action in case of surprise.

When it is necessary to move the limbers by a route other than the line of advance of the platoon he will detail the next senior N.C.O. to accompany them.

The latter will receive orders on the following points :—

Route.

Time to start.

Pace of movement.

Rendezvous (pointed out if possible).

2. The platoon commander's duties on decision to occupy a position :—

i. Having ascertained the position of our own troops, the nature and extent of the target, and decided on the number of guns and the amount of ammunition required to engage it, he reconnoitres for a platoon area from which there is no immediate overhead problem.

Where it is necessary to use the whole platoon and direct fire is possible he decides on :—

Section areas.

Arrangements for local protection.

Arcs of fire (if required).

A position in readiness for each section.

The position of platoon headquarters.

ii. He then rides back to the platoon, which is either moving on its line of advance or is at a rendezvous. He signals for all N.C.Os., gives them the situation briefly, points out to the platoon serjeant a rendezvous near the position at which he intends to give his final orders, and instructs him to move the section commanders and platoon headquarters there at once.

He himself remains and gives orders to the section corporals which will include :—

The position in readiness for each section and the routes to them.

The amount of ammunition required forward.

iii. He then proceeds to the position to which he has sent the platoon serjeant and gives orders as under :—

To the platoon serjeant and section commanders.

Information and intention.

1st Target and/or Arcs of Fire.

Section areas.

Positions in readiness.

That it is safe to fire.

Rates of fire.

Arrangements he is making for local protection.

Position of platoon headquarters.

(Having received these orders the section commanders accompanied by their runners move to their respective areas.)

To platoon serjeant—The duties he is to carry out.

To observer—1st Target and arcs of fire.

Any special orders for watching and locating the enemy or own troops.

To scouts—Orders for local protection.

It may be possible to give some or all of these orders at the same time as those to the section commanders.

iv. When time permits or the tactical situation is such that he himself must remain forward, he may send a runner back with a written message after he has completed his reconnaissance. The message would contain the rendezvous for section commanders and platoon headquarters and orders for the section corporals as above.

3. Duties during the occupation of the position :—

i. The section commander of each section.—

On arrival in his section area he will select :—

The section position within the area allotted to him.

His control position.

A gun position for each gun.

Reference points.

There are three alternative methods of bringing the guns into action open to the section commander :—

(a) To use the section runner to mark for one gun position while he himself marks for the other one.

(b) To signal the guns up in turn, point out to each No. 1 as he arrives, gun position, 1st target, arc of fire and reference points.

(c) To go back and bring forward Nos. 1 with tripods as far as cover allows and point out gun positions, etc., as in para. ii, below.

He gives orders to section headquarters :—

To range-taker.—

1st target.

Arc of fire.

Points to which he requires ranges.

His own control position.

To runner.—

Position of platoon headquarters.

ii. The section corporal of each section.—

According to the orders he has received from the platoon commander :—

(a) Moves the section to its position in readiness.

(b) On arrival at position in readiness orders "Prepare for action."

(c) Details amount of ammunition required, and Nos. to carry ammunition above normal.

(d) Sends the range-taker forward to section commander.

(e) Gives limber driver a definite point to which he will return when signalled for and sends limber to covered position.

(f) Keeps touch with section commander and when he receives an indication of the section position from the movement of the section commander, moves the section forward as ground permits.

(g) Orders guns into action when signalled for.

4. Duties in action :—

i. The platoon commander.—

(a) Keeps in touch with the tactical situation, carrying out a forward reconnaissance where necessary.

(b) Sends fire direction orders as required.

(c) Reports to company headquarters regarding the tactical situation, or the ammunition state, etc.

He may delegate some of these duties to the platoon serjeant.

ii. The platoon serjeant.—

Acts as 2nd-in-command to the platoon commander, carrying out any of the above duties as required.

iii. The section commander.—

Controls the fire of his section.

Interprets fire direction orders he receives from platoon commander.

Locates and deals with targets within his arc.

Solves any safety problems as they arise.

iv. The section corporal of each section.—

Supervises the supply from the limbers to the gun position, and maintains communication between them.

X. Modifications for an indirect-fire position

1. The platoon commander's duties on decision to occupy the position :—

i. Having elected to employ indirect fire, carries out his reconnaissance and decides on :—

Position of the observation post.

The gun line and gun frontage.

Arrangements for local protection.

The method to be used, and, if necessary which will be the directing gun.

Position of platoon headquarters (normally near position from which he is going to observe).

Position in readiness for the platoon.

Amount of ammunition required.

ii. He then either goes back to the platoon and gives verbal orders to all N.C.Os. or sends back his runner with written orders.

The orders will contain the following :—

The situation briefly.

The method of indirect fire he intends to employ.

Instructions for platoon serjeant, platoon headquarters and one range-taker to move forward to the area in which the position will be.

(The platoon serjeant takes with him the instruments, etc., which are required.)

Instructions to senior section commander to move the platoon to the position in readiness.

The amount of ammunition required.

iii. He then returns to the position to which he has sent platoon headquarters, and gives information and orders which will include the following.

To range-taker—

1st target.

Other points to which the range may be required.

To observer and scouts—

As for a "direct fire position."

To platoon serjeant—

Full information.

Observation post.

Gun line.

Gun frontage and directing gun if necessary.

Position of platoon headquarters.

iv. He will then establish an observation post and proceed with calculations for engaging his target.

2. Duties during the occupation of the position :—

i. The platoon serjeant—

Having received the platoon commander's orders, supervises the guns coming into action and carries out the duties laid down for him in "Platoon drill—Indirect fire."

When the section runners report to him he sends one to platoon headquarters and keeps the other himself.

ii. The senior section commander.—

Moves platoon to the position in readiness, and on arrival orders — "For indirect fire—Prepare for action."

Orders the amount of ammunition to be taken out of the limber, and if above normal details loads to higher numbers.

Gains touch with the platoon serjeant at the gun line, moves the platoon forward to a position in rear of the gun line and halts it in line.

Carries out the duties laid down for him in "Platoon drill—Indirect fire."

iii. The junior section commander.—

Assists the senior section commander during the move to the position in readiness.

Carries out the duties laid down for him in "Platoon drill—Indirect fire."

iv. The senior section corporal.—

Sends the two section runners and one range-taker forward to the platoon serjeant.

Moves limbers from the position in readiness to a covered position.

Organizes supply from limbers to the gun line making use of junior section corporal as necessary.

3. Duties in action—

i. The platoon commander.—

As in a direct-fire position, except that normally he will control the fire of his platoon.

As before, he may delegate any of his duties to the platoon serjeant. Where this entails the platoon serjeant leaving the gun line the senior section commander will carry out the platoon serjeant's duties at the gun line, and the section corporal of that section will take the place of the senior section commander.

ii. The platoon serjeant.—

Commands at the gun line, and reports S.A.A. state to platoon commander.

Carries out such duties as are laid down for him in "Platoon drill—Indirect fire."

Will be prepared to carry out any of the platoon commander's duties when ordered.

iii. The section commanders.—

Carry out such duties as are laid down for them in "Platoon drill—Indirect fire."

The senior section commander will be prepared to carry out the duties of platoon serjeant if required.

iv. The section corporals.—

Supervise and control the supply from the limbers to the gun line.

Will be prepared to command their sections in action should their section commander be in command of the gun line.

XI. Modification for an immediate overhead problem

1. Duties prior to the move on to the position.—

Before a decision can be made to occupy any position, calculations must be made to ensure that it is safe to open fire from it over the heads of our own troops.

The platoon commander.—

i. Makes rough reconnaissance for probable positions, direct or indirect and decides on the most favourable.

ii. Returns to the platoon.

iii. Sends forward a reconnaissance party consisting of a range-taker, observer, runner and batman-groom to a rendezvous near the proposed gun position.

Gives platoon serjeant the situation briefly if not already done and orders him to move the platoon to a forward rendezvous.

iv. He then returns to the rendezvous to which he has sent the range-taker, etc., and orders :—

Range-taker—To obtain range to target and own troops.

Observer—To watch the enemy and own troops.

v. When the range-taker has obtained the necessary ranges the platoon commander will solve the overhead problem from that part of the probable position which is least favourable. When firing direct he will instruct the range-taker to rejoin his section.

vi. If it is safe to fire he will carry out the necessary detailed reconnaissance for the occupation of the position and issue orders for its occupation in the normal manner.

XII. The duties prior to and during occupation of positions by night

1. Duties of platoon commander where preliminary reconnaissance can be carried out by daylight :—

i. Duties prior to occupation.

He will take with him on his reconnaissance as a minimum :—

1 range-taker.

1 runner with director and pegs.

If possible, section commanders should be taken forward to view the ground by daylight, when the runner may not be required.

Having chosen the exact position or positions for the platoon, the platoon commander will instruct the range-taker to take the necessary ranges, put in a gun peg and direction peg for each gun, aligned either on to a target or a fixed line. When more than one target is to be engaged, pegs will be aligned on to a zero line. He will measure the angles of sight and switches, if any. Before leaving the position, he will note the magnetic bearing of the zero line.

He will select positions in readiness for the sections, and point them out to the section commanders if present.

If section commanders are not present, and the section positions are widely separated, he also chooses a forward rendezvous.

ii. Duties on occupation of the position.—

If section commanders were present during the

reconnaissance they will lead their sections direct to their position in readiness, and bring their sections into action.

If section commanders were not present, the platoon commander will lead the platoon to the forward rendezvous or to one of the positions in readiness.

He will take forward one of the sections, and will point out to the section commander his position in readiness and the gun and direction pegs. He will then return to the place where he left the other section, lead it to its position in readiness, and point out gun and direction pegs to section commander as above.

The section commanders send guides to lead their sections from positions in readiness, and carry out duties for "Section drill—Night firing."

2. Duties of platoon commander when no daylight reconnaissance is possible—

It is possible to arrange for fixed lines with fair accuracy at close ranges provided that a light can be shown on the place where the fire is to fall.

The platoon commander will choose positions for his sections either off the map or by personal reconnaissance.

He will proceed with a torch to the place or places where he requires the fire of the section, and expose the light in the direction of the guns.

The range-taker at the guns will take the range to the light, and the Nos. 1 lay for direction with day sights. The angle of sight will be taken with the director. On completion, a light signal may be fired from the gun position.

Elevation is placed on the gun with the clinometer.

XIII. Duties of the brigade machine-gun officer during training

1. The brigade machine-gun officer can do much during the individual training season to assist units in their machine-gun training.

2. The following are some of the duties suggested:—

- i. Assist the battalion commander in the organization and supervision of machine-gun training.
- ii. Organize brigade range-taking classes and arrange for periodical tests.
- iii. During brigade and battalion exercises without troops to draw attention to such machine-gun problems on tactical handling as may arise.
- iv. Study current machine-gun problems and hold conferences with machine-gun officers so as to keep in touch with their views, methods, etc.
- v. Keep in close touch with the general staff officer for weapon training at Command Headquarters.

PART II

TACTICAL EMPLOYMENT

XIV. *Characteristics, powers and limitations*1. *Characteristics.*—

The characteristics of the machine gun govern its tactical employment, and can be summarized as follows:—

- i. Its power of delivering concentrated, accurate and sustained fire.
- ii. Its effectiveness at long ranges.
- iii. Its ability to provide overhead fire either direct or indirect.
- iv. Its ability to fire on pre-arranged lines in darkness, fog, smoke, etc., provided certain technical reconnaissances have been carried out first in daylight (minimum of 1 hour), and a view of the target from the vicinity of the gun position obtained.
- v. The length of its beaten zone in proportion to width (300 yards by 5 yards at 1,000 yards range). Consequently enfilade fire is particularly effective and capable of affording close support to attacking troops.
- vi. Its dependence on accurate range-taking and rigid control to ensure fire effect.
- vii. The difficulty of locating and destroying it if well handled. Its vulnerability if discovered. (It can be betrayed by its steam after 4-6 belts rapid fire, by dust, flash, or noise of firing.)

- viii. Its high rate of ammunition expenditure.
- ix. Its lack of power when moving.

We therefore have a weapon very valuable in attack and defence when employed for definite tasks in accordance with its characteristics. Accuracy in range-taking and tactical skill in manœuvre and in the allotment of tasks are of primary importance.

2. *Methods, rates and types of fire: fire effect.*—

i. *General.*—Direct fire is the normal and most effective method of engaging a target. It should always be employed when the situation is uncertain and the enemy may have to be engaged anywhere in an allotted arc. Machine guns cannot function to full capacity unless their fire can be maintained under all conditions, i.e., even when the target is invisible from the gun position. In defence they should be given first an arc of fire and later "Fixed lines."* In attack the first essential is the initial targets, an arc being allotted later if circumstances allow. In both cases every effort should be made to select positions from which machine guns can cover as wide an arc as possible in addition to firing on any definite targets given.

ii. *Rates of fire.*—Machine guns use three rates of fire—slow, medium, rapid. At these rates they expend a belt of 250 rounds in four, two and one minutes respectively. During prolonged firing, pauses are necessary, so that guns may be oiled.

* A "fixed line" is the direction and elevation given to a machine gun in order that its fire can be maintained on a specified target or area, in darkness, smoke, fog, etc.

iii. *Fire effect.*—

(a) Observation of strike of bullet can never be certain, hence machine-gun fire is dependent on accurate range-taking and the employment of an adequate number of guns according to range.

(b) In calculating the number of guns required for a particular task it may be taken that one section is capable of effectively neutralizing 100 yards of front or of dealing with a single target such as a hostile machine gun post up to a range of 1,500 yards. Beyond that range double the number of guns will be required to obtain similar results.

iv. *Overhead fire.*—Fire over the heads of our own troops can be quickly employed with safety so long as certain precautions are observed, i.e. :—

(a) Accurate range-taking.

(b) Correct safety clearance according to lie of ground, range to target and to friendly troops, which is obtained automatically by means of the machine gunner's slide rule.

v. *Indirect fire.*—In certain situations it may not be possible or advisable to view the target from the gun position. In such cases fire is brought to bear from a gun position where the target is not visible. Each section carries the necessary equipment for carrying out this type of fire, which requires certain technical preparation of a simple nature. A well-trained platoon should open indirect fire within about 15 minutes of having reached its position of readiness. Indirect fire which should normally be by platoons, has the advantage that the sub-units using it preserve their liberty of manoeuvre.

3. *Security.*—Machine guns, when once established in

occupation of a position, should, on favourable ground, be able to protect themselves for a limited period.

It may be necessary to move machine guns without escort on such tasks as the following :—

- i. To employ them wide on the flanks to obtain oblique or enfilade fire.
- ii. To forestall the enemy in the occupation of a position.

4. *Mobility.*—The speed with which a machine-gun platoon can be brought into action depends largely on the means of transport provided for the different commanders, range-takers, guns, and essential gun numbers. Machine guns may be transported on :—

- i. *Horsed limbered wagons.*—Six men can be carried short distances at the trot on the limber.
- ii. *Six-wheel lorries* as used at present by cavalry provide increased mobility, but are unwieldy and conspicuous.
- iii. *Armoured carriers* (at present experimental) are mobile and inconspicuous, and when used with the trailer can quickly transport 5 men in addition to the driver from point to point. They are thus useful when the gun is used in forward and supporting roles, and in wider movements to obtain enfilade fire effect.
- iv. *Pack.*—When pack transport is employed for machine guns their mobility is approximately equal to that of their parent arm, cavalry or infantry, as the case may be.

Whatever the form of transport, delay will occur if platoon or section commanders and range-takers are

unable to proceed ahead of the guns for the necessary reconnaissances.

XV. Employment of machine guns

1. *Grouping and control.*—The tactical unit is the platoon, the fire unit is the section, except for indirect fire, when the platoon is normally the fire unit.

Since the section is normally the fire unit the guns should be under the voice control of the section commander. The use of single guns should be exceptional because :—

- i. There is the risk of cessation of fire from mechanical reasons.
- ii. A single gun cannot develop a satisfactory beaten zone.
- iii. There is only one range-finder per section.

Again, as the platoon commander can control his two sections in action only by voice or by runner, they should not be widely dispersed. But on occasions, both in attack and defence, the independent employment of sections may be necessary.

If it is necessary to make a detachment (brigade control, etc.), a platoon is the smallest sub-unit which should be so detached.

In whatever way machine guns are employed, the importance of retaining depth in their dispositions must not be forgotten.

2. *Maintenance in action.*—Each machine gun has 14 belts of ammunition on the gun limber. The whole of this ammunition would allow only a medium rate of fire for half an hour. A further 18 belts are carried

in regimental reserve. Strict fire control is therefore essential.

The battalion commander will be responsible for laying down the number of belts to be expended in any particular phase of an attack, and the number to be maintained at the gun in defence.

Dumping of ammunition for specific purposes may be authorized by the superior commander.

Although two men can maintain a gun in action once it is in position and supplied with ammunition, three are necessary to carry gun, tripod, condenser and one belt of ammunition into action even a short distance. The third man is available to bring up more ammunition. The remaining personnel can come up later.

3. Application and co-ordination of machine gun fire.—

i. The duties of the fire unit commander are :—

- (a) To select fire positions.
- (b) To indicate targets.
- (c) To give range and order sight adjustments.
- (d) To order rate of fire.
- (e) To observe fire.
- (f) To watch movements of our own troops so as to ensure that his fire is safe.
- (g) To ensure that ammunition is not wasted.

Fire should normally be deliberate, rapid fire being considered as a reserve of power for emergencies. Subject to orders from above, the responsibility for deciding when to open fire rests with the platoon commander.

ii. In co-ordinating the fire of artillery and machine guns, priority in the allotment of tasks should, if possible, be given to the latter, since they have inferior range, a

flatter trajectory and therefore less searching power, and cannot as a rule obtain observation of their fire.

The closest co-operation between artillery and machine guns is necessary not only in the preparation of the fire plan, but also throughout the progress of the battle.

iii. In order to afford the infantry efficient and continuous support in the attack, those entrusted with the duty of providing supporting fire require to know :—

- (a) The exact position from time to time of the forward troops.
- (b) Their immediate objective.
- (c) The type of fire which is preventing the forward troops attaining their objective, and where it is coming from.

Subordinate infantry commanders must therefore keep artillery and machine-gun commanders supporting them continuously informed on these points, and machine-gun commanders on their part must take every step to keep in touch with the forward situation.

4. *Intercommunication.*—No signallers are allotted specifically to work with machine guns.

Machine-gun requirements must therefore be considered in deciding on the intercommunication system for the unit as a whole, and signallers and signalling equipment distributed accordingly.

XVI. Machine guns in attack

1. *General.*—

i. Normally, attacking battalions will retain control of the whole of their machine-gun resources, but they may be allotted certain brigade tasks in the opening stages. All or part of the machine-gun companies of

battalions in reserve may be utilized to increase the covering fire for the initial advance. For this purpose they may be kept under brigade control or placed temporarily at the disposal of an attacking battalion.

ii. Machine guns in the attack should :—

- (a) Support by fire the advance of the rifle companies.
- (b) Protect flanks.
- (c) Assist consolidation.
- (d) Deal with counter-attacks.
- (e) Provide a reserve of fire power.

The carrying out of these various tasks will necessitate some machine-gun platoons being always in action, while others are moving forward in a series of bounds, the principle of depth being thus assured. (*See Sec. 65*), F.S.R., Vol. II, 1929.)

2. *Distribution.*—In the attack, guns are normally divided into forward, supporting and reserve guns, whose roles are as follows :—

i. *Forward guns* are kept ready to move forward with the attack. They may be allotted one of two roles, either to act in close support of the leading troops or to assist in consolidation.

If in close support their lines of advance should be chosen so as to allow them to open fire quickly, preferably from a flank, if the forward infantry are held up. If detailed for consolidation tasks, they should be moved by a covered line of advance.

ii. *Supporting guns* in co-operation with artillery, neutralize as many as possible of the localities

suspected to be held by the enemy. As the attack passes beyond the limit of their range, they may be brought into reserve or moved forward to assist in consolidation or protection of flanks, or to give covering fire for a further advance.

- iii. *Reserve guns* may be kept mobile or be allotted tasks in the initial stage of the attack, and in later phases act as forward or supporting guns.

The proportion of guns employed in each role must depend on the nature of the attack, but to ensure continuous support a frequent interchange of roles will be necessary. Whatever the role, arrangements must be made to ensure a system of close and continuous observation over the battlefield.

All platoons should therefore operate under their own company commander, control only being decentralized to rifle company commanders when it is obvious that the former will be unable to exercise efficient control.

3. *The time factor.*—The provision of machine-gun covering fire will often prove to be the limiting factor in staging an attack. The following factors will affect the time required to reconnoitre and occupy machine-gun positions :—

- i. Nature of the ground.
- ii. Importance attached to surprise. Undue haste may tend to disclose the front selected for attack.
- iii. Amount of covering fire required. Ammunition must be at the guns before the attack starts and personnel for carrying it up is limited.

- iv. The distance machine gun companies are from their allotted fire positions. (Majority of personnel have to walk.)

4. *Action of battalion commander :—*

i. *Reconnaissance and plan.*—Having received his orders, in which he should be informed if there are any brigade tasks for his machine guns or if any of his machine guns will be taken into brigade control, the battalion commander will carry out his reconnaissance accompanied, when possible, by his machine-gun company commander and his supporting artillery commander.

His reconnaissance will help him to decide :—

- (a) The amount of machine-gun fire he requires for each stage of the attack.
- (b) What special assistance he may require from other machine-gun companies.
- (c) The apportioning of tasks between supporting artillery and machine guns.

ii. *Orders to machine-gun company commander.*—Having based his plan on his reconnaissance, the battalion commander will give the following orders to his machine-gun company commander :—

- (a) Objectives of rifle companies and their lines of advance.
- (b) Stages of the attack and timings.
- (c) The fire plan, including details of the fire tasks allotted respectively to artillery, machine gun and rifle companies.
- (d) Proportion of machine guns required as forward guns.

- (e) Timing of attack if fire is to be maintained when targets are obscured by smoke, etc.
- (f) His machine-gun requirements for consolidation and protection of flanks.
- (g) Composition, location, and role of the battalion reserve (including machine guns).
- (h) Ammunition expenditure by stages of the attack, and arrangements as regards dumping and the formation of brigade or battalion ammunition reserve.
- (i) Intercommunication—location of battalion headquarters and its projected line of advance.

5. Action of company commander :—

i. *Reconnaissance and plan.*—To save time, the company commander, before accompanying his battalion commander on his reconnaissance, should give warning orders to his company. These should include :—

- (a) Warning of the attack impending and probable time for preparation.
- (b) Forward rendezvous of the company.
- (c) Rendezvous and time at which he will meet his platoon commanders.
- (d) His own intended action.

ii. The company commander may or may not have time to make his own separate reconnaissance. He must, however, decide the number of guns required to carry out the tasks given him and the best areas from which to do so. For this he must know the extent of each target and the areas available for gun positions. He will then fix the number of guns required to give covering fire, and their areas. He will select assembly

areas and lines of approach for his platoons and lines of advance for forward guns.

iii. *Issue of orders.*—Orders will normally be verbal, platoon commanders making notes, especially in the case of any timed programme. Sufficient detail of the rifle companies' method of attack should be given as will ensure intelligent support, and also an outline of the artillery support arranged.

Each platoon will be given its area, role and tasks, rate of fire and number of belts of ammunition that may be expended and the amount to be dumped.

Platoons detailed as forward guns will be given their assembly areas and told their line of advance, and any subsequent role.

iv. *Control.*—The machine-gun company commander must be at hand to advise as to the part his guns can play should the battalion commander issue fresh orders to meet unexpected situations which may arise during the attack. He should keep in touch with the moves of his platoons and arrange to ensure the rapid despatch of fresh orders to his platoon commanders.

6. Action of platoon commander :—

i. *Reconnaissance and forward movement of platoon.*—As soon as he has been allotted his task, the platoon commander will order his platoon to a forward rendezvous near its probable assembly area or gun positions. He will himself proceed to carry out his reconnaissance, which will vary as to whether his guns are forward, supporting or reserve guns.

ii. *Forward guns.*—

(a) Assembly position should be under cover from ground and air observation.

(b) Line of advance. To avoid if possible having to use overhead fire, this should be to a flank of the rifle companies' lines of advance and within reach of high ground.

(c) Suitable positions should be selected along their line of advance from which fire can be opened, and movement made from one to another by bounds.

iii. *Supporting guns.*—In co-operation with the artillery, such guns will have the primary task of neutralizing known enemy posts, or areas believed to conceal hostile troops. In addition, they should be allotted arcs within which to watch for unexpected developments.

In selecting areas from which his guns are to fire, the platoon commander should choose those from which the beaten zone of the guns will have the greatest effect on the targets. They should be to a flank and as far forward as possible. Direct fire positions should normally be chosen so that fire can be switched quickly from one target to another.

In taking up positions, concealment from enemy observation is of primary importance.

When, owing to hostile fire and lack of cover, there is a danger of heavy casualties, indirect fire positions may be adopted for supporting guns. There will also be occasions when insufficient direct fire positions are obtainable.

iv. *Reserve guns.*—The platoon commander of reserve guns should get as wide a view as possible of the ground over which the attack is taking place. He will thus be

in a position to undertake any unforeseen duty or to move forward to act in a forward or supporting role in a later phase.

He should select both concealed assembly areas and suitable alternative lines of advance.

7. *Issue of orders.*—All ranks will be told what is known of the enemy, the support to be provided by the artillery and the objectives of the rifle companies. In addition, forward platoons will be told their line of advance; supporting platoons their targets, arcs within which unexpected targets are to be engaged and any restrictions as to time or rate of firing. If a subsequent role has been allotted, all ranks should be informed.

8. *Co-ordination and control.*—Before giving his orders, the platoon commander will, if time permits, get into touch with the company commander whom he is supporting to ensure that his fire support is in accordance with the final plan for the attack. When a platoon is advancing, the platoon commander should go on ahead, keeping in touch with the rifle company commander and selecting in advance suitable positions from which to support the attack if necessary. The platoon serjeant will lead the platoon.

When both his sections are in action independently in direct fire positions, the platoon commander will place himself where he can best observe the targets or arc allotted to him. Control will normally be effected through a runner. When in indirect fire positions, the platoon commander will control his platoon himself by voice.

9. *The machine-gun section in the attack.*—The section commander is responsible for :—

- i. Reconnaissance and selection of his gun positions.
- ii. Fire direction and control.
- iii. Observation of fire effect and checking of range.
- iv. Watching for and solving safety problems as they arise in connection with the advance of the rifle companies.

10. *Ammunition supply.*—The battalion and machine-gun company commander will specify the number of belts which may be dumped prior to an attack commencing, and will take steps to ensure that limbers are at once refilled. All limbers should, if possible, be full when the attack commences.

Supply as the attack develops will be carried out as for other small-arm ammunition, brigade and battalion reserves being moved forward by bounds as the attack proceeds.

Machine-gun platoon commanders must notify their company headquarters both as regards their stocks of ammunition and as to their position and lines of advance, so that further supplies may reach them quickly.

Machine-gun ammunition is issued packed in stripless belts, and this fact imposes added responsibility on those charged with the supply of small-arm ammunition.

Only an intelligent anticipation of needs, combined with early notification of expenditure, will prevent machine-gun ammunition running short.

XVII. Machine guns in defence

1. *General.*—Fire is the dominant factor in a successful defence; every commander must therefore organize his

fire plan as thoroughly as the time, conditions and resources at his disposal will permit, in order that the fire of his artillery, machine guns, light automatics and rifles may be co-ordinated to the best advantage.

Machine guns should be organized in depth, and should be sited so as to sweep with enfilade or oblique fire the probable lines of enemy approach as well as to protect the rifle company localities. They should normally occupy direct fire positions, so as to engage rapidly any target which may appear within the arc of fire allotted to them. Concealment from enemy observation is of primary importance.

2. *Methods of fire :—*

i. *Defensive fire* is commenced from the moment that it is evident that the enemy is attacking the foremost posts. All machine guns that can bear on the front of attack will open fire :—

(a) *When the target is visible.*—On the enemy within the arc or arcs allotted. If exceptionally vulnerable targets appear elsewhere, the sub-unit commanders concerned must exercise their own judgment whether to open fire according to the situation, nearness of enemy, etc.

(b) *When the target is invisible.*—On fixed lines which have been previously arranged to ensure fire effect as close as possible in front of the foremost defended posts. This fire will be applied for a stated period and at a given rate, being repeated on a further call.

ii. *Counter-preparation* is fire directed against areas where it is believed, from information received, that the enemy are forming up to attack. Details and orders

for such fire will be issued by the superior commander. The signal for opening this fire, its rate and duration, will be settled previously.

iii. *Harassing fire* aims at interfering with anticipated movements of the enemy, e.g. reliefs, reserves, working parties, etc. Fire should be opened on probable approaches at irregular intervals, and for uncertain periods. Details and orders for such fire will be issued by the superior commander, who will specify the amount of ammunition that may be expended on it. This ammunition should be dumped at the machine guns, and limbers immediately refilled.

3. *Distribution*.—Machine guns in defence should be divided into forward guns, supporting guns, and reserve guns. The siting and handling of each category differ, and are given in detail below :—

i. *Forward guns* should be placed where they can defend the forward infantry defended posts. They will be given arcs of fire at once and fixed lines later, as the latter cannot be laid down until the infantry posts are definitely fixed. They will not be allotted counter-preparation and harassing fire tasks.

ii. *Supporting guns* will be sited primarily to check the further advance of the enemy, should he succeed in breaking through the lines of foremost localities, but may also be allotted secondary tasks on fixed lines to thicken up the defensive curtain of fire along the front.

iii. *Reserve guns* may be placed in positions in rear, to assist in the defence of localities, or they may form the framework of a position to be occupied

in emergency by the reserve or may be held in mobile reserve, i.e. on wheels.

4. *The time factor* :—

i. The method of reconnaissance and occupation of the position by machine-gun sub-units will be dependent on the time available. Machine-gun commanders should therefore be told by what time their guns must be ready to fire.

ii. All guns able to fire on ground in advance of the forward posts will invariably be brought into action as soon as possible, and allotted arcs to observe in order to provide immediate defence; but it is inadvisable to attempt to arrange fixed lines for machine guns until the foremost line of defended localities has been sited.

iii. When unlimited time, however, is available, it may be possible to co-ordinate a machine-gun defence along the whole front, the infantry posts being sited later to fill in the gaps and to conform to the fixed lines of the machine guns.

iv. In all cases, however, it is most important that tasks should be given in time for machine-gun commanders to reconnoitre and lay out fixed lines in daylight, otherwise fire will be effective only so long as observation of the hostile attack is possible.

5. *Co-ordination and control*.—Brigade control in the first instance will be exercised best by :—

i. Allotting certain machine-gun tasks to battalions.

ii. Ensuring that the machine-gun fire plan is actually co-ordinated with that of the artillery, especially on interbattalion or interbrigade boundaries.

As the position becomes more highly organized, brigade and even divisional control will increase.

The duties of the brigade machine-gun officer in respect of the above are set out in Sec. XX.

6. *Action of battalion commander :—*

i. *Reconnaissance and plan.*—Having received his superior's orders, which should include information as to any brigade tasks there may be for his machine guns, the battalion commander should make his reconnaissance, accompanied, if possible, by his machine-gun company commander and the artillery commander supporting him.

The object of his reconnaissance will be to see how the fire of the various weapons can be co-ordinated for the defence of the localities for which he is responsible. He must bear in mind the following points :—

- (a) What portion of the ground it is essential to hold so as to sweep effectively the probable lines of approach.
- (b) What concealed approaches to the position exist which the enemy might use.
- (c) What are the obstacles which may restrict the enemy's advance and where he will have to pass them.
- (d) Whether there are any features which, if occupied by the enemy, would dominate the defence.
- (e) What facilities the ground offers for counter-attack, and which are the localities vital to the defence which must be regained if lost.

ii. *Issue of orders.*—The battalion commander's orders to his company commanders will include :—

- (a) Information about the enemy.
- (b) The general dispositions of the battalion as between forward troops and battalion reserve. The localities to be held and their allotment to companies.

- (c) The fire plan. This, as regards machine guns, should include distribution and tasks.
- (d) The composition and location of the reserve, the probable direction and objective for counter-attack, and the fire support to be provided.
- (e) The relative importance to be given to concealment as against cover from fire.
- (f) Orders as to ammunition expenditure and arrangements for replenishing.
- (g) Machine-gun harassing fire or counter-preparation tasks, if any.
- (h) Administrative arrangements, e.g. food, water, great coats, transport, etc.
- (i) Position of battalion headquarters, the system of intercommunication, and the signal for counter-preparation and defensive fire.

7. *Action of machine-gun company commander :—*

i. *Reconnaissance and plan.*—Before accompanying his battalion commander on his reconnaissance, the company commander should :—

- (a) Issue warning orders to his company.
- (b) Give a forward rendezvous to all or part of his company if time would thus be saved.
- (c) Give a rendezvous where he will meet platoon commanders.

While on the reconnaissance he will be ready to advise as to areas where the ground is particularly suitable or otherwise for machine-gun fire.

He will estimate the number of guns required for each task. He should mark on his map suitable machine-gun positions, and be prepared to issue orders to his

platoon commanders at once on joining them, should further reconnaissance be impossible.

ii. *Issue of orders.*—The orders of the company commander to his platoon will include :—

- (a) Information of the defended localities and the location of the headquarters of the rifle company concerned.
- (b) Allotment of machine-gun tasks.
- (c) The number of belts to be maintained at each gun, and any instructions regarding restriction of ammunition to be expended on counter-preparation and harassing fire tasks.
- (d) Location of ammunition reserve.
- (e) Administrative arrangements.
- (f) The signal to be used for the opening of defensive and counter-preparation fire, and from where it will be sent up. Location of company headquarters and allotment of signallers, if any.

The detail in which the company commander will issue his orders will depend upon the time factor. In some cases it may be possible for him to allot areas, arcs of fire and even fixed lines, while in others he may only be able to order platoons to protect certain localities, leaving the rest to the platoon commander. The less detailed his orders, the more important will it be for him to co-ordinate later the fire of his platoons.

In allotting tasks, platoons should be distributed by sections from front to rear, as control is thereby facilitated.

iii. *Command and control.*—Control will be exercised largely by :—

- (a) Keeping platoon commanders informed of the situation.

(b) The employment, under the orders of the battalion commander, of the battalion mobile reserve of machine guns.

(c) Ensuring that all guns have an adequate supply of ammunition.

8. *Action of machine-gun platoon commander.*—

i. *Reconnaissance and plan.*—The amount of reconnaissance a platoon commander will require to do after receipt of his orders will depend upon the detail in which such orders have been given. He will in any case have to select positions in the area allotted to him. These should cover as wide an arc as possible, consistent with adequate concealment.

To allow of sufficient control, sections should not be more than about 300 yards apart, while they should not be placed so close together that one shell can put both out of action.

It is most important that reconnoitring should not in any way disclose the positions selected for the guns.

Before proceeding on his reconnaissance the platoon commander should give all possible information to his platoon serjeant and give him a forward rendezvous to which to lead the platoon.

ii. *Issue of orders.*—Orders will be verbal, and given, if possible, within view of the ground to be swept by the fire of the machine guns. They should include :—

- (a) Information about the enemy and neighbouring rifle companies.
- (b) Role of the platoon in the defensive fire plan.
- (c) Arcs of fire of each section.
- (d) Fixed lines and the minimum number of belts to be retained for defensive fire tasks.

- (e) Secondary tasks, in order of importance.
- (f) Where limbers are to be concealed.
- (g) Location of ammunition reserve.
- (h) Administrative arrangements.
- (i) Position of platoon headquarters.
- (j) Signal for defensive or counter-preparation fire, and from where it will be sent up.

Instructions should be added as to whether guns are to be dug in or reliance placed on natural cover only.

Orders for harassing fire, entailing a timed programme, should be issued in the form of a table.

iii. *Command and control*.—Only when in an indirect fire position will it be possible for a platoon commander to control his platoon by voice.

Normally, therefore, the platoon commander must be guided by circumstances as to whether he will make his headquarters near the headquarters of the nearest rifle company or select a more forward position within voice control of one of his sections, where he will be able better to watch the development of the fight.

9. *The machine-gun section in defence*.—The reconnaissance of the section commander will be limited to the selection of the actual gun positions in the area allotted to him by his platoon commander, and to the selection of a headquarters from which to watch all the ground in his arc.

His duties will be as follows :—

- i. To bring the section into action.
- ii. To explain orders received, including arcs, rates of fire, signals, etc.
- iii. To arrange for local protection, and digging.

- iv. To see that all ammunition and equipment required, including extra water, oil, etc., is at the gun position.
- v. To get in touch with the headquarters both of his platoon and of the nearest rifle sub-unit.
- vi. To reconnoitre for alternative positions.

XVIII. *Machine guns in protection*

1. *Outposts* :—

i. In view of reduced bayonet strength in the battalion, the machine-gun company must be prepared to take its share in outpost duties ; by day and in open country there is no difficulty ; by night in fog, or in close country arrangements will be necessary to provide local protection from outside the machine-gun company.

ii. General principles as regards siting, duties and the selection of positions of machine guns in defence (Sec. XVII) apply generally in the case of machine guns in the outpost position.

iii. Machine guns can be employed singly or by sections to provide the necessary concentrated fire on any well-defined target such as a bridge or road.

iv. By day, unless the enemy is close at hand, it is not necessary for personnel to occupy their positions, but they should be retained under cover near their guns. By night, positions should be occupied, and guns laid on "fixed lines" which should be made known to the commanders of protective detachments.

2. *Advanced guard*.—Duties may be summarized as follows :—

- i. To assist in driving back the enemy's advanced troops.

- ii. To assist in holding any tactical locality gained, so as to cover the deployment of other troops.
- iii. To protect an exposed flank.

In case of a battalion acting as advanced guard to an infantry brigade, some machine guns will be detailed to support the vanguard. If it is necessary for machine guns to be placed under the command of the vanguard commander, they will revert to their own company control when the deployment of the remainder of the battalion renders a more centralized control advisable.

3. *Rear guard*.—As a rear guard will usually be required to hold position, with the minimum number of men, an ample proportion of machine guns should be allotted to it.

The following principles are applicable :—

- i. Direct fire should be used, and fire opened at long ranges. Positions selected should give a wide arc of fire.
- ii. Machine guns should be disposed mainly on the flanks, and should be handled by platoons as far as possible.
- iii. Defence in depth must be maintained by the retirement of alternate sections or platoons.
- iv. Machine guns should be sited with due regard to the close proximity of suitable covered positions for limbers, armoured carriers, etc., and also to the prospects of ultimate withdrawal.
- v. Arrangements should be made for the reconnaissance of covered lines of withdrawal, and for the previous selection of positions in rear, which, if sited so as to cover the flanks of the more

forward guns, will give additional power to the defence.

- vi. Machine guns with a portion of the personnel in carriers, or limbers, may, in accordance with the nature of the country and the actions of the enemy, be among the last to evacuate the position.

4. *Flank guards*.—Movements of a flank guard will normally consist of an advance from one tactical feature covering the march of the main body to another. Machine guns can be employed in such circumstances to secure each feature in turn.

XIX. Machine guns with cavalry

1. Experience in the tactical handling of the re-organized cavalry regiment has emphasized the following points :—

- i. The possession of 12 machine guns has increased the fire power of the regiment. This fire power is to be used to maintain the mobility of the sabre squadrons; it is therefore necessary that machine guns should have a high degree of mobility.
- ii. The governing principle in the employment of the machine-gun squadron is to use it as far as possible to prevent the sabre squadrons becoming pinned in a fire fight. If they are so immobilized, the task of the machine guns is by fire to restore to the sabre squadrons their mobility.
- iii. Bold handling of machine guns, even ahead of sabre squadrons if necessary, gives considerable additional power to cavalry.

2. Machine-gun detachments will always be prepared to come into action with the greatest rapidity. The sudden opening of a well-directed and heavy volume of fire is of the greatest importance. A few seconds delay may well make all the difference between the success or failure of an operation.

The allotment of tasks to the machine-gun squadron is of primary importance. The maximum effect will be obtained from surprise and from enfilade fire.

The boldness with which machine guns are employed will depend upon the vigour which it is intended to impart to the action. Thus, in a pursuit, some machine guns should be close behind the foremost troops. Machine guns can be detached to considerable distances to hold defiles or passages across obstacles, and so give freedom of movement to sabre squadrons.

3. In support of a mounted attack, quickness in opening fire is the first consideration. It may often be impossible to carry out a previous reconnaissance, or to take advantage of cover when coming into action. The guns must be handled rapidly and boldly, and every effort made to open effective fire before the attack is launched.

Concealment is of less importance than observation, and the position should afford a clear view of the whole of the ground over which the attack is to take place. This may render a commanding position advisable.

4. It is often necessary to allot a machine-gun troop to a sabre squadron if the sabre squadron is on detached duty, and it will often be necessary temporarily to attach to machine guns a small party of mounted troops

for the purpose of protection and of reconnaissance (both of the enemy and of the ground).

5. The tactical unit is the troop of four guns; it is, normally, the fire unit for indirect fire. The section of two guns is the fire unit for direct fire. Though it is, in principle, inadvisable to split up the troop, the dispersed nature of cavalry operations will often necessitate the employment of sections independently.

XX. Brigade machine-gun officer—Duties

1. *General.*—The brigade machine-gun officer is not a commander; he is attached to brigade headquarters, and as such assists and advises his commander concerning the employment and tasks of the machine guns in the brigade. He gives effect to orders issued to those guns taken under brigade control for a specific purpose.

i. In attack :—

(a) He co-ordinates the tasks of machine guns in the fire plan. The extent to which this may be possible depends on the time available for preparation.

(b) He keeps in touch with battalion and machine-gun company commanders and readjusts allotted tasks, if necessary.

(c) He keeps in touch with the artillery commander supporting the brigade attack, and watches co-ordination between artillery and machine guns.

ii. In defence :—

(a) As decentralization is advisable at the outset, the brigade machine-gun officer should refrain from interference during the preliminary stages of the organization of the defence, intervening only should there be a clash between units in the occupation of machine-gun

positions or should dispositions be contrary to the brigade commander's plan. During the above period, he should, however, keep in touch with battalion and machine-gun company commanders thus keeping himself fully conversant with the machine-gun dispositions.

(b) In the later stages he modifies machine-gun tasks as necessary and co-ordinates with the artillery commander covering the brigade front.

Printed under the authority of HIS MAJESTY'S STATIONERY OFFICE
by William Clowes and Sons Ltd., London and Beccles.

(89) Wt. 23608—9798/1915. 35m. 3/30. W. C. & S., Ltd. Gp. 309.





This manual has been scanned by the
Vickers MG Collection & Research Association

www.vickersmg.org.uk

Please support the work of the Association.

Click on the image to donate through PayPal:



Or regularly support us through Patreon:

